BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554

In the Matter of	)	
	)	
Wireless E911 Location Accuracy Requirements	)	PS Docket No. 07-114
	)	
Revision of Commission's Rules to Ensure	)	CC Docket No. 94-102
	)	
Association of Public-Safety Communications Officials-International, Inc. Request for Declaratory Ruling	)	
	)	
911 Requirements for IP-Enabled Service Providers	)	WC Docket No. 05-196

To: The Commission

COMMENTS OF CORR WIRELESS COMMUNICATIONS, LLC ON SECTION III.B OF PROPOSAL

Corr Wireless Communications, LLC ("Corr") submits these comments in response to the Commission's June 1, 2007 Notice of Proposed Rulemaking in this Docket. Corr has previously submitted comments opposing the precipitous, retroactive and unwise application of a rule requiring PSAP-based measurement of E-911 compliance. As will be set forth below, the better way to improve E-911 reliability is to mandate A-GPS capability in all GSM handsets.

I. The Solution to Many E-911 Issues is A-GPS Technology

Corr recently completed the transition of its network from a legacy TDMA system to a state of the art GSM system with better functionality and vendor support than it had been able to achieve with the old system. One area where the

GSM system could be improved, however, is in access to GPS technology. Corr and many other similarly situated carriers rely on network-based solutions to meet the Commission's E-911 prescriptions. As is now widely acknowledged, network-based solutions experience difficulties in rural areas because they all require some degree of triangulation in order to get an accurate fix on the caller's location. In rural areas, there are often just one or two cells providing coverage because there is insufficient demand to justify more than that. These cells are perfectly adequate to provide high quality phone service and even Phase I E-911 service, but they are incapable of achieving the 95% pinpoint accuracy required by Section 20.18 of the rules. As we stated in our original comments in this Docket, the result is a direct clash between the laws of physics and the laws of the FCC: you just can't get there from here.

One answer might be to lower the accuracy threshold to a more realistic level for rural areas (as set forth below). The better long-term solution is to require all new GSM handsets to be equipped with A-GPS capability. "Assisted GPS" is generally acknowledged to be the single best proven way of achieving high location accuracy using a cell phone. The technology harnesses both the functionality of the cellular network and the locating capabilities of GPS. This combination allows the network to locate callers precisely even when in urban canyons or indoors under circumstances where GPS or network solutions alone would not provide an accurate reading. Our understanding is that an A-GPS user can normally be located well within the precision parameters specified by the Commission's current rules

without regard to whether the user is in a rural or urban area. In fact, the precision may be even greater in rural areas where obstructions to satellite reception may be fewer.

At present there appears to be insufficient market demand to drive manufacturers to produce A-GPS-enabled GSM handsets or to do so at affordable prices. Typically, only an order by a leading nationwide carrier for millions of units would stimulate production of such devices. To date, that order has not been placed. The smaller rural carriers who have the greatest need for A-GPS because of the rural nature of their markets do not have the "pull" to cause a manufacturer to develop such products. If A-GPS on GSM systems is to become a reality, therefore, there must be a market intervention by the regulatory agency. (GPS technology is already widely available to CDMA networks, but the mandate should obviously apply across the board.)

An FCC mandate that A-GPS technology be incorporated into GSM phones would drive the production of millions of phones at affordable prices for consumers. The phones could be phased in over a schedule similar to that employed by the Commission for the original handset-based solution. Since cell phones "turn over" at a rate of every 18 – 30 months,[1] we could anticipate that an entire generation of cellular users could be converted via natural upgrades to A-GPS units in about five to six years. All customers would have precise location accuracy without the need

[1] *Amendment of Part 22 of the Commission's Rules to Modify or Eliminate Outdated Rules Affecting the Cellular Radiotelephone Service and Other Commercial Mobile Radio Services*, 19 FCC Rcd. 3239 (2004) at Para. 29.

for billions of dollars in additional otherwise unnecessary investment in cell sites and network infrastructure. This expedient would essentially moot many of the issues raised by the Commission in this Docket and many of the concerns of the public safety community. The issue of where and how to measure accuracy would disappear because accuracy would be relatively high *everywhere*.

Corr therefore suggests that the best solution for all concerned is to require A-GPS technology to be incorporated into all new user handsets as of two years from the adoption of an order in this Docket. That would permit present inventories to be used up and new compliant devices to be designed and produced in quantity. CMRS carriers and other phone suppliers would then distribute these exclusively in the market. Within five years, the vast majority of the CMRS marketplace would have been converted to this superior technology.

II. Adoption of a Uniform Accuracy Standard

The Commission's NPRM sought comment on the adoption of a single accuracy standard for all E-911 calls. Ideally, a uniform accuracy standard would be desirable both to avoid confusion and to assist public safety personnel in knowing the degree of accuracy they can expect for all E-911 calls. If the Commission adopts the solution outlined above, there would be no problem with adopting the current handset-based accuracy standard across the board, and Corr would support such a standard. The standard under those circumstances would be meetable by all. However, until the full transition contemplated by the A-GPS proposal occurs, there cannot be a single accuracy standard. As we and others have explained on many

occasions, a network-based solution in a rural area is simply incapable of meeting even the current network-based accuracy standard reliably. There has therefore been a continuing irresolvable clash between what the Commission's rules require and what an efficiently designed system can accomplish.

If the Commission does not adopt a mandatory, phased-in handset solution (or, if it does adopt such a solution, until the market absorbs the new equipment), there must be a separate standard applicable to rural areas. We believe a workable standard in such areas – defined as areas where there is overlap of signals from fewer than three base stations – should reduce the required accuracy level for network solutions to a level which is actually achievable from one or two base stations. It serves no one's interests to establish an accuracy requirement that cannot physically be achieved with current network technology. At the same time, in rural areas, there is usually not a need for extremely precise locations because people and structures in these areas are sparser and "stand out" more. Unlike a call from a city neighborhood where there may be hundreds of cars, apartment buildings and houses in close proximity, in rural areas there are often only a few widely separated structures and many fewer vehicles. An accident on a rural road, for example, can be quite easily located by emergency teams because there are fewer cross streets than there are in cities. Thus, while less precision is possible in rural areas, less precision is needed. Not only would the standard proposed here be capable of achievement in the real world, but it would fully meet the needs of public safety to be able to find people in emergencies.

III. Periodic Testing is Unnecessary

There is no need whatsoever for periodic testing of E-911 compliance. Once accuracy levels are attained, the level of accuracy typically only gets better, not worse. Absent a significant reduction in service, which is an extremely rare occurrence, periodic testing would serve no purpose and would simply impose unnecessary costs on carriers – costs which would ultimately have to be passed on to customers.

IV. Application of Accuracy Standard to Roamers

The NPRM correctly acknowledged that different location technologies may not serve the needs of roamers. For example, a customer from a home system with a network-based E-911 solution who does not have a GPS-enabled handset will not be able to be located precisely in a foreign system that depends on handset-based solutions. This is a simple fact implied by the existence of differing location technologies. While there remain network-based and handset-based technologies, there is no technical way to bridge this gap. Adoption of the proposal to mandate A-GPS technology, as urged above, would effectively eliminate this issue, but so long as there are incompatible technologies, it would plainly be irrational to expect or require carriers to provide a solution to roamers that their network is incapable of providing to their own customers.

V. Conclusion

For the reasons set forth above, Corr strongly urges the Commission to mandate that A-GPS technology be incorporated into all handsets. This will obviate

virtually all of the other issues presented by this NPRM and would result in highly accurate location capabilities by all carriers in both rural and urban environments in a matter of seven to eight years. Unless and until that measure is adopted, the Commission must recognize the scientific limitations of the present network-based solutions in delivering precisely accurate readings in rural environments. The rules should reflect that fact, both for home subscribers and roamers.

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